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A NEW FORM OF MICROSCOPE STAND WITH CONCENTRIC MOVEMENTS, BY J. D. COX. (PAGE 147).

EDW. BAUSCH.—In the microscope just described by Gov. Cox, I have applied the Wenham binocular prism, mounted, however, in a manner different from that which has been hitherto followed. I believe the method is a new one, and offers a number of advantages over the old form. While the prism has been mounted in a shifting box in the Wenham plan, I have mounted a circular glass disk with parallel sides inside of the nose-prism, and close to the society-screw. This I did in the latter so that the surfaces were true. To the upper side of this disk I connected the horizontal surface of the prism, and then placing the nose-piece in the tube applied heat to the same, and easily fixed the prism in its correct position. The opening in the nose-piece is circular and 15 mm. in diameter, and the face of the prism, which is connected to the disk, covers just one-half of it. As there are probably few objectives with the society-screw, even of the lowest powers and highest angular aperture, in which the available opening of the posterior system exceeds 15 mm., it is evident that all the light is utilized in this form of binocular as well as on a monocular microscope, that is, one-half of the light passes through the disk without undergoing any change, the other half is reflected by the prism and is transmitted to the oblique tube. I have fixed the prism in a nose-piece which may be attached or detached from the tube instantaneously by a bayonet catch, and have provided another nose-piece without prism, which is worked in the same manner.

I find that with a large number of objectives, the effect when using the monocular tube of the microscope only, is as good when the prism is attached, as in the other forms when it is withdrawn, and this is easily explained by the fact that the unoccupied portion of the disk, through which the light passes, is as large as the space which is given when the prism is withdrawn, as in the other form; or that for work where medium and high power objectives are not usually used, the prism may remain in the tube, as the outfit of a microscope is usually made up of two objectives, the lower power may remain in the prism nose-piece, the higher one in the other, so that with the ability to exchange nose-pieces quickly, which I mentioned previously, the advantages of the double nose-piece are approximately gained.

The stereoscopic effect with this form is the same as the other with considerable advantage that objects are seen much brighter. Indeed, I have shown this binocular to some persons, who were accustomed to the old form, who claimed that it had a glare, whereas it was merely the fact that it transmitted a larger amount of light than those which they had been using. The effect was somewhat similar when I attached considerably higher eye-pieces.

CATALOGUING, LABELING AND STORING MICROSCOPICAL PREPARATIONS, BY SIMON H. GAGE. (PAGE 196).

PROF. A. H. CHESTER showed a case for microscopic objects, devised by Mr. Robert Browne, Jr., of the New Haven Observatory, and similar to those in which Prof. Smith sends out his sets of diatoms. He recommended the use of a number of these small cases rather than the large case of drawers recommended by Prof. Gage. Each box holds thirty slides in a case that will easily slip into the pocket, and can be set up on the shelf of a book case. It has a movable flap-cover over the slides, on which there is a list of numbers so that the slides can be catalogued. These cases are cheap and convenient, the slides always lie flat. The outer case effectually excludes the dust, and finally, as the collection grows, the number of cases can be easily increased.

DR. BLACKHAM.—I would say that I have long made use of a plan similar to that shown by Prof. Chester, and even cheaper. I took the common rack boxes for twenty-four slides, and putting on the cover, pasted a piece of stout twilled muslin on the back and lapping over on to the cover. This formed a hinge and gave the boxes a uniform look. Each box was devoted to a special series, or class of objects, and properly labeled, and then stood up on end in a revolving book case. The slides lie flat, and my whole collection is